WEST Search History



DATE: Tuesday, June 08, 2004

Hide?	Set Name	Query	Hit Count
	DB = USP'	$T,EPAB,JPAB,DWPI,TDBD;\ PLUR=YB$	ES; OP=OR
	L8	L7 and 424/450.ccls.	53
	L7	L6 and alcohol\$	147
	L6	liposom\$ adj1 gel	237
	L5	L4 and alcohol\$	160
	L4	liposom\$ adj1 gel\$	258
	L3	L2 and (polyhydric adj1 alcohol\$)	8
	L2	L1 and alcohol\$	321
	L1	liposom\$ adj3 gel\$	544

END OF SEARCH HISTORY

Hit List



Search Results - Record(s) 1 through 30 of 53 returned.

☐ 1. Document ID: US 6726925 B1

Using default format because multiple data bases are involved.

L8: Entry 1 of 53

File: USPT

Apr 27, 2004

US-PAT-NO: 6726925

DOCUMENT-IDENTIFIER: US 6726925 B1

TITLE: Temperature-sensitive liposomal formulation

DATE-ISSUED: April 27, 2004

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Needham; David

Durham

NC

US-CL-CURRENT: 424/450; 424/1.21, 424/9.321, 424/9.51, 424/94.3

Full Title Citation Front Review Classification Date Reference Sequences Attactiments Claims NMC Draw De

☐ 2. Document ID: US 6713533 B1

L8: Entry 2 of 53

File: USPT

Mar 30, 2004

US-PAT-NO: 6713533

DOCUMENT-IDENTIFIER: US 6713533 B1

TITLE: Nanocapsules and method of production thereof

DATE-ISSUED: March 30, 2004

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Panzner; Steffen

Halle

 \mathbf{DE}

US-CL-CURRENT: 523/202; 424/450, 424/451, 524/205, 524/210

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KMC Draw Do

3. Document ID: US 6699499 B1

L8: Entry 3 of 53

File: USPT

Mar 2, 2004

US-PAT-NO: 6699499

DOCUMENT-IDENTIFIER: US 6699499 B1

TITLE: Amphiphilic materials and liposome formulations thereof

DATE-ISSUED: March 2, 2004

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Aneja; Rajindra

Ithaca

NY

US-CL-CURRENT: <u>424/450</u>; <u>424/1.21</u>, <u>424/417</u>, <u>424/9.321</u>, <u>424/9.51</u>, <u>424/94.3</u>, <u>428/402.2</u>, <u>554/103</u>, <u>554/227</u>, <u>554/79</u>, <u>554/80</u>

Full Title Citation Front Review Classific.	ation Date Reference Sequences i	Attachments Claims KillC Draw. De
☐ 4. Document ID: US 6623753	B1	
L8: Entry 4 of 53	File: USPT	Sep 23, 2003

US-PAT-NO: 6623753

DOCUMENT-IDENTIFIER: US 6623753 B1

TITLE: Allylamine-containing liposomes

DATE-ISSUED: September 23, 2003

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Bodmer; David Klingnau CH Kissel; Thomas Staufen DE Richter; Friedrich Schonbuhl CH Tiemessen; Harry Binningen CH

US-CL-CURRENT: 424/450; 424/43

Full	Title Citation	Front Rev	iew Classification	Date Reference	Sequences Att	achments Cla	ims KW	D Drawi De
	5. Docum	ent ID: US	6469084 B2					
L8: Er	try 5 of	53		File: US	SPT	C	ct 22,	2002

US-PAT-NO: 6469084

DOCUMENT-IDENTIFIER: US 6469084 B2

TITLE: Process for preparing an aqueous composition in gel form and compositions obtainable from this process, especially a composition containing vesicles, in

particular liposomes

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Iliopoulos; Ilias Paris FR Cartalas-Sarrazin; Anne Issy-les-Moulineaux FR Loyen; Karine Le Havre FR Audebert; Roland St Leu la Foret FR Meybeck; Alain Courbevoie FR Tranchant; Jean-Fran.cedilla.ois Marigny-les-Usages FR

US-CL-CURRENT: <u>524/376</u>; <u>424/450</u>, <u>424/70.31</u>, <u>523/102</u>, <u>524/394</u>, <u>524/555</u>, <u>524/556</u>, <u>524/804</u>

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Full	Title	Citation	Front	Review	Classification	Date	Reference Sequences Attachments Claims Killic Draw. De
							and the same same same same same same same sam

☐ 6. Document ID: US 6399094 B1

L8: Entry 6 of 53

File: USPT

Jun 4, 2002

US-PAT-NO: 6399094

DOCUMENT-IDENTIFIER: US 6399094 B1

** See image for Certificate of Correction **

TITLE: Unilamellar liposomal preparations with high active substance content

DATE-ISSUED: June 4, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Brandl; Martin 79104 Freiburg DΕ Bachmann; Dieter Hamburg DE Reszka; Regine Schwanebeck DΕ Drechsler; Markus Berlin DE

US-CL-CURRENT: 424/450; 264/4.1, 264/4.3, 428/402.2

Full Title Citation Front Review Classification	Date Reference Sequences	Attachments Claims RMMC Draw De
☐ 7. Document ID: US 6379698 B1		
	m'1	
L8: Entry 7 of 53	File: USPT	Apr 30, 2002

US-PAT-NO: 6379698

DOCUMENT-IDENTIFIER: US 6379698 B1

** See image for Certificate of Correction **

TITLE: Fusogenic lipids and vesicles

Record List Display Page 4 of 14

DATE-ISSUED: April 30, 2002

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Leamon; Christopher Paul

West Lafayette

IN

US-CL-CURRENT: 424/450; 435/320.1, 435/455, 435/458, 514/44

Full Title Citation Front Review Classification	Date Reference Sequences Attact	ments Claims KMMC Draw De
☐ 8. Document ID: US 6352716 B1 L8: Entry 8 of 53	File: USPT	Mar 5, 2002

US-PAT-NO: 6352716

DOCUMENT-IDENTIFIER: US 6352716 B1

TITLE: Steroidal liposomes

DATE-ISSUED: March 5, 2002

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Janoff; Andrew S. Yardley PAPopescu; Mircea C. Plainsboro NJ Weiner; Alan L. Lawrenceville NJ Bolcsak; Lois E. Lawrenceville ŊJ Tremblay; Paul A. Hamilton NJ Swenson; Christine E. Princeton Junction NJ

US-CL-CURRENT: $\underline{424/450}$; $\underline{264/4.1}$, $\underline{264/4.6}$, $\underline{424/1.21}$, $\underline{424/9.1}$, $\underline{436/829}$, $\underline{514/182}$, $\underline{514/78}$, $\underline{514/887}$, $\underline{514/967}$

Full Title Citation Front Review Cl	assification Date Reference Sequences Aff.	echinests Claims KillC Draw Da
☐ 9. Document ID: US 6288	137 B1	
L8: Entry 9 of 53	File: USPT	Sep 11, 2001

US-PAT-NO: 6288137

DOCUMENT-IDENTIFIER: US 6288137 B1

TITLE: Process for preparing an aqueous composition in gel form and compositions obtainable from this process, especially a composition containing vesicles, in particular liposomes

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME

CITY STATE ZIP CODE COUNTRY

Iliopoulos; Ilias	Paris	FR
Cartalas-Sarrazin; Anne	Issy-les-Moulineaux	FR
Loyen; Karine	Le Havre	FR
Audebert; Roland	St Leu la Foret	FR
Meybeck; Alain	Courbevoie	FR
Tranchant; Jean-Fran.cedilla.ois	Marigny-les-Usages	FR

US-CL-CURRENT: $\underline{523}/\underline{105}$; $\underline{424}/\underline{450}$, $\underline{424}/\underline{70.31}$, $\underline{524}/\underline{236}$, $\underline{524}/\underline{376}$, $\underline{524}/\underline{394}$, $\underline{524}/\underline{555}$, $\underline{524}/\underline{556}$

Full Title	Citation Front Review	Classification Date Refe	rence Sequences Att	achments Claims	KWIC	Draww De
□ 10.	Document ID: US 6	284267 B1			***************************************	
L8: Entry	10 of 53	Fi	le: USPT	Sep	4,	2001

US-PAT-NO: 6284267

DOCUMENT-IDENTIFIER: US 6284267 B1

** See image for Certificate of Correction **

TITLE: Amphiphilic materials and liposome formulations thereof

DATE-ISSUED: September 4, 2001

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Jun 5, 2001

Aneja; Rajindra

Ithaca

NY

US-CL-CURRENT: 424/450; 424/1.21, 424/417, 424/9.321, 424/9.51, 424/94.3, 428/402.2, 436/829, 554/103, 554/227, 554/79, 554/80

	Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWIC	Drawd De
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,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		11.	Docum	ent ID	: US 6	241967 B1							

File: USPT

US-PAT-NO: 6241967

L8: Entry 11 of 53

DOCUMENT-IDENTIFIER: US 6241967 B1

TITLE: Process and device for the production of liquid, disperse systems

DATE-ISSUED: June 5, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sachse; Andreas	10589 Berlin			DE
Schneider; Thomas	12161 Berlin			DE
Rossling; Georg	13465 Berlin			DE

US-CL-CURRENT: 424/9.321; 424/450, 424/9.1, 424/9.3

Full Title Citation Front Review Classification Date Reference **Sequences Affectments** Claims KiniC Draw, De

☐ 12. Document ID: US 6200598 B1

L8: Entry 12 of 53

File: USPT

Mar 13, 2001

US-PAT-NO: 6200598

DOCUMENT-IDENTIFIER: US 6200598 B1

** See image for Certificate of Correction **

TITLE: Temperature-sensitive liposomal formulation

DATE-ISSUED: March 13, 2001

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Needham; David

Durham

NC

US-CL-CURRENT: 424/450; 424/1.21, 424/9.321, 424/9.51, 424/94.3

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KiMC Draw. De

☐ 13. Document ID: US 6165501 A

L8: Entry 13 of 53

File: USPT

Dec 26, 2000

US-PAT-NO: 6165501

DOCUMENT-IDENTIFIER: US 6165501 A

TITLE: Radiation-protective phospholipid and method

DATE-ISSUED: December 26, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Tirosh; Oren Holon IL
Kohen; Ron Jerusalem IL
Katzhendler; Jehoshua Jerusalem IL
Barenholz; Yechezkel Jerusalem IL

US-CL-CURRENT: <u>424/450</u>; <u>558/169</u>, 558/186

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims MMC Draw De

☐ 14. Document ID: US 6086851 A

L8: Entry 14 of 53

File: USPT

Jul 11, 2000

US-PAT-NO: 6086851

DOCUMENT-IDENTIFIER: US 6086851 A

TITLE: Pharmaceutical compositions containing interdigitation-fusion liposomes and

gels

DATE-ISSUED: July 11, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Boni; Lawrence T. Monmouth Junction NJ Yardley Janoff; Andrew S. PA Minchey; Sharma R. Monmouth Junction NJ

Perkins; Walter R. Monmouth Junction NJ Swenson; Christine E. Princeton Junction NJ

Ahl; Patrick L. Princeton NJ Davis; Thomas S. Valhalla NY

US-CL-CURRENT: $\underline{424}/\underline{9.4}$; $\underline{264}/\underline{4.1}$, $\underline{264}/\underline{4.3}$, $\underline{264}/\underline{4.32}$, $\underline{424}/\underline{450}$, $\underline{428}/\underline{402.2}$, $\underline{428}/\underline{402.24}$

Full Title Citation Front Review Classification Date Reference Sequences Attachinerts Claims KiniC Draw De

☐ 15. Document ID: US 6048546 A

L8: Entry 15 of 53

File: USPT

Apr 11, 2000

US-PAT-NO: 6048546

DOCUMENT-IDENTIFIER: US 6048546 A

TITLE: Immobilized lipid-bilayer materials

DATE-ISSUED: April 11, 2000

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Sasaki; Darryl Y. Albuquerque MM Loy; Douglas A. Albuquerque NM Yamanaka; Stacey A. Dallas TX

US-CL-CURRENT: $\underline{424}/\underline{450}$; $\underline{264}/\underline{4.1}$, $\underline{264}/\underline{4.3}$, $\underline{424}/\underline{484}$, $\underline{424}/\underline{486}$, $\underline{428}/\underline{402.2}$

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims Kinic Draw De

☐ 16. Document ID: US 5851548 A

L8: Entry 16 of 53 File: USPT

Dec 22, 1998

US-PAT-NO: 5851548

DOCUMENT-IDENTIFIER: US 5851548 A

TITLE: Liposomes containing cationic lipids and vitamin D

DATE-ISSUED: December 22, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Dattagupta; Nanibhushan San Diego CA Das; Aditya Ranjan San Diego CA Sridhar; C. Nagaraja Simi Valley CA

Patel; Jasmin R. San Diego CA

US-CL-CURRENT: 424/450; 530/323, 554/223, 554/224, 554/227, 564/296

Full Title Citation Front	Review Classification Date Referenc	oe Sequences Affachments Claims KillO Draw	Œ.
			_

☐ 17. Document ID: US 5834016 A

L8: Entry 17 of 53 File: USPT

Nov 10, 1998

US-PAT-NO: 5834016

DOCUMENT-IDENTIFIER: US 5834016 A

TITLE: Liposome-based topical vitamin D formulation

DATE-ISSUED: November 10, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Naeff; RainerLangwiesenCHDelmenico; SandroSchaffhausenCHSpycher; ReneSchaffhausenCH

Corbo; Mike Flemington NJ

Flother; Frank Schaffhausen CH

US-CL-CURRENT: 424/450

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMC Draw De

☐ 18. Document ID: US 5820879 A

L8: Entry 18 of 53

File: USPT

Oct 13, 1998

US-PAT-NO: 5820879

DOCUMENT-IDENTIFIER: US 5820879 A

TITLE: Method of delivering a lipid-coated condensed-phase microparticle

composition

DATE-ISSUED: October 13, 1998

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Fernandez; Julio M.

Rochester

MN

Knudson; Mark B.

Shoreview

MN

US-CL-CURRENT: 424/450; 424/1.21, 424/489, 424/490, 424/9.4

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMIC Draw D.

☐ 19. Document ID: US 5820848 A

L8: Entry 19 of 53

File: USPT

Oct 13, 1998

US-PAT-NO: 5820848

DOCUMENT-IDENTIFIER: US 5820848 A

TITLE: Methods of preparing interdigitation-fusion liposomes and gels which

encapsulate a bioactive agent

DATE-ISSUED: October 13, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Boni; Lawrence T. Monmouth Junction NJ Janoff; Andrew S. Yardley PA

Minchey; Sharma R. Monmouth Junction NJ
Perkins; Walter R. Monmouth Junction NJ

Swenson; Christine E. Princeton Junction NJ
Ahl; Patrick L. Princeton NJ

Davis; Thomas S. Valhalla NY

US-CL-CURRENT: 424/9.4; 264/4.1, 424/1.21, 424/450, 424/9.321, 436/829, 516/102

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KNMC Draw, De

☐ 20. Document ID: US 5759519 A

L8: Entry 20 of 53

File: USPT

Jun 2, 1998

US-PAT-NO: 5759519

DOCUMENT-IDENTIFIER: US 5759519 A

** See image for Certificate of Correction **

TITLE: Method for the intracellular delivery of biomolecules using thiocationic

lipids

DATE-ISSUED: June 2, 1998

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Sridhar; C. Nagaraja Simi Valley CA
Patel; Jasmin R. San Diego CA
Dattagupta; Nanibhushan San Diego CA
Das; Aditya Ranjan San Diego CA

US-CL-CURRENT: 424/9.341; 424/1.11, 424/450, 424/9.1, 424/9.3

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims Full Draw D:

21. Document ID: US 5756352 A

L8: Entry 21 of 53 File: USPT May 26, 1998

US-PAT-NO: 5756352

DOCUMENT-IDENTIFIER: US 5756352 A

** See image for Certificate of Correction **

TITLE: Thiocationic lipid-nucleic acid conjugates

DATE-ISSUED: May 26, 1998

INVENTOR-INFORMATION:

NAME CITY ZIP CODE COUNTRY STATE Sridhar; C. Nagaraja Simi Valley CA Patel; Jasmin R. San Diego CA Dattagupta; Nanibhushan San Diego CA Das; Aditya Ranjan San Diego CA

US-CL-CURRENT: 435/375; 424/450, 514/44, 536/23.1

Full Title Citation Front Review Classification Date Reference Sequences Attachments Claims KNMC | Draw. Dr.

22. Document ID: US 5753261 A

L8: Entry 22 of 53 File: USPT May 19, 1998

US-PAT-NO: 5753261

DOCUMENT-IDENTIFIER: US 5753261 A

TITLE: Lipid-coated condensed-phase microparticle composition

DATE-ISSUED: May 19, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Fernandez; Julio M. Rochester MN Knudson; Mark B. Shoreview MN

US-CL-CURRENT: 424/450; 424/489, 424/490

Full | Title | Citation | Front | Review | Classification | Date | Reference | **Sequences | Attachments |** Claims | Killion | Draw, De

☐ 23. Document ID: US 5741513 A

L8: Entry 23 of 53

File: USPT

Apr 21, 1998

US-PAT-NO: 5741513

DOCUMENT-IDENTIFIER: US 5741513 A

TITLE: Alcoholic aqueous gel-like phospholipid composition, its use and topical

preparations containing it

DATE-ISSUED: April 21, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Ghyczy; Miklos Koln DE Roding; Joachim Wiesbaden DE Lautenschlager; Hans Pulheim DE Hameister; Walter Pulheim DE Hager; Jorg Koln DE

US-CL-CURRENT: $\underline{424}/\underline{450}$; $\underline{264}/\underline{4.1}$, $\underline{264}/\underline{4.3}$, $\underline{424}/\underline{401}$, $\underline{514}/\underline{944}$

Full Title Citation	Front Review	Classification Dat	Reference Sequence	es Attachments Claims	K001C Draw, De

☐ 24. Document ID: US 5711965 A

L8: Entry 24 of 53

File: USPT

Jan 27, 1998

US-PAT-NO: 5711965

DOCUMENT-IDENTIFIER: US 5711965 A

TITLE: Alcoholic aqueous gel-type phospholipid composition, its use and topical preparation containing it

preparacion concarning it

DATE-ISSUED: January 27, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY Ghyczy; Miklos Koln DE Roding; Joachim Wiesbaden DE Lautenschlager; Hans Pulheim DE Hameister; Walter Pulheim DE Hager; Jorg Koln DΕ

US-CL-CURRENT: $\underline{424}/\underline{450}$; $\underline{424}/\underline{400}$, $\underline{424}/\underline{401}$, $\underline{424}/\underline{417}$, $\underline{424}/\underline{420}$, $\underline{428}/\underline{402.2}$

☐ 25. Document ID: US 5711964 A

L8: Entry 25 of 53

File: USPT

Jan 27, 1998

US-PAT-NO: 5711964

DOCUMENT-IDENTIFIER: US 5711964 A

** See image for Certificate of Correction **

TITLE: Method for the intracellular delivery of biomolecules using liposomes

containing cationic lipids and vitamin D

DATE-ISSUED: January 27, 1998

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Dattagupta; Nanibhushan San Diego CA
Das; Aditya Ranjan San Diego CA
Sridhar; C. Nagaraja Simi Valley CA
Patel; Jasmin R. San Diego CA

US-CL-CURRENT: <u>424/450</u>; <u>514/44</u>

IC Drawu De	Claims K000C	chments Clair	Sequences Attachn	Reference	Date	Classification	Review	Front	Citation	Title	Full
		•	· · · · · · · · · · · · · · · · · · ·								

☐ 26. Document ID: US 5686103 A

L8: Entry 26 of 53

File: USPT

Nov 11, 1997

US-PAT-NO: 5686103

DOCUMENT-IDENTIFIER: US 5686103 A

TITLE: Liposomal product with a ligand having fucose as a terminal moiety

DATE-ISSUED: November 11, 1997

INVENTOR-INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Redziniak; Gerard St Cyr en Val FR
Cerdan; Dominique Sully-sur-Loire FR
Kieda; Claudine Orleans FR
Monsigny; Michel Saint-Cyr-en-Val FR

US-CL-CURRENT: 424/450; 424/401

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMC Draw. De

☐ 27. Document ID: US 5643598 A

L8: Entry 27 of 53

File: USPT

Jul 1, 1997

US-PAT-NO: 5643598

DOCUMENT-IDENTIFIER: US 5643598 A

TITLE: Method of skin care utilizing liposomes containing Scutellaria extracts

DATE-ISSUED: July 1, 1997

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Meybeck; Alain

Courbevoie

FR

US-CL-CURRENT: 424/450; 424/401, 424/741, 514/844

Full Title Citation Front Review Classification Date Reference **Sequences Attachments** Claims KMC Draw. Do

☐ 28. Document ID: US 5626873 A

L8: Entry 28 of 53

File: USPT

May 6, 1997

US-PAT-NO: 5626873

DOCUMENT-IDENTIFIER: US 5626873 A

TITLE: Emulsions

DATE-ISSUED: May 6, 1997

INVENTOR - INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Weiner; Alan L.

Lawrenceville

NJ

Carpenter-Green; Sharon

Gaffney

SC

US-CL-CURRENT: 424/455; 424/450, 514/2, 514/3

Full | Title | Citation | Front | Review | Classification | Date | Reference | **Sequences | Attachments |** Claims | KiMC | Draw, De

☐ 29. Document ID: US 5620689 A

L8: Entry 29 of 53

File: USPT

Apr 15, 1997

US-PAT-NO: 5620689

DOCUMENT-IDENTIFIER: US 5620689 A

TITLE: Liposomes for treatment of B-cell and T-cell disorders

DATE-ISSUED: April 15, 1997

INVENTOR-INFORMATION:

NAME

CITY

STATE ZIP CODE

COUNTRY

Allen; Theresa M.

Edmonton

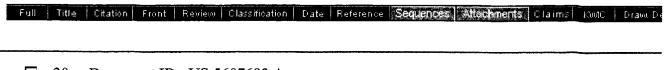
CA

Martin; Francis J.

San Francisco

CA

US-CL-CURRENT: <u>424/178.1</u>; <u>424/180.1</u>, <u>424/181.1</u>, <u>424/450</u>, <u>424/812</u>, <u>530/391.7</u>



☐ 30. Document ID: US 5607693 A

L8: Entry 30 of 53

File: USPT

Mar 4, 1997

US-PAT-NO: 5607693

DOCUMENT-IDENTIFIER: US 5607693 A

TITLE: Cosmetic or pharmaceutical composition, especially dermatological composition, containing oxyacanthine, intended in particular for stimulating hair growth or retarding hair loss

DATE-ISSUED: March 4, 1997

INVENTOR-INFORMATION:

NAME

CITY

STATE

ZIP CODE

COUNTRY

Bonte; Frederic

Courbevoie

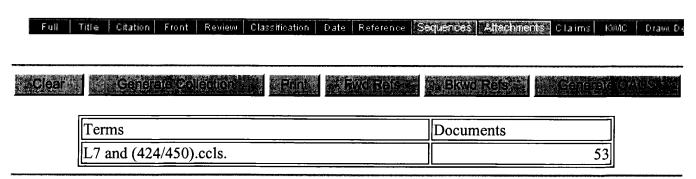
FR

Meybeck; Alain

Courbevoie

FR

US-CL-CURRENT: 424/450; 424/775, 514/308, 514/880



Display Format: - Guarge Forma

Previous Page

Next Page

Go to Doc#

First Hit Fwd Refs



L8: Entry 17 of 53

File: USPT

Nov 10, 1998

DOCUMENT-IDENTIFIER: US 5834016 A

TITLE: Liposome-based topical vitamin D formulation

Brief Summary Text (16):

(d) a lower <u>alcohol</u> (preferably ethanol).

Detailed Description Text (6):

The <u>alcohol</u> component is a lower alkanol of one to six carbon atoms, such as methanol, ethanol, n-propanol, isopropanol, n-butanol and the like in amounts ranging from 0.5 to about 8.0 grams per 100 grams of composition. Ethanol is preferred.

Detailed Description Text (7):

Dependent on the amount to be applied and/or the place of application, the use of highly fluid products for topical application of Vitamin D is unfavorable. It is therefore advantageous to include a gelling agent in the composition to provide a less fluid product. As already mentioned above, it is already known from WO 85/03640 to sequester liposomes in a gel matrix whereby, according to said state of the art document, the gelling agent shall have no influence on the liberation rate of an effective substance with a molecular weight of less than about 2000 Daltons. Surprisingly, however, it has now been found that contrary to the teachings of WO 85/03640, the type of gelling agent can have great influence on the liberation rate of the effective substance. It has been found that a liposomal formulation as described above, but additionally comprising one or more a polyacrylate(s) such as carboxypolymethylene (carbomer) as gelling agent, makes possible a much better skin penetration of the active ingredient e.g. Calcitriol than do e.g. paraffin ointment bases or liposome-based formulations with e.g. xanthan gum as gelling agent. By the use of polyacrylate(s) as gelling agent(s), the penetration abilities of the highly fluid liposome-based formulations are at least reached or even enhanced.

Detailed Description Text (29):

Liposome-Based Gel

Detailed Description Text (32):

The production of the liposome-based gel was performed as the one of the dispersion according to Example 1 with the exception that after the liposome formation according to Example 1 the Carbomer 974 P was admixed, followed by a sodium hydroxide solution.

Detailed Description Text (37):

Liposome-Based Gel with Xanthan Gum

Detailed Description Text (58):

The results from the in vitro skin penetration study indicate that the <u>liposome gel</u> manufactured with Carbomer 974 P achieved calcitriol skin levels approximately 2-fold higher than the paraffin-based ointment or the <u>liposome gel</u> formulation with xanthan gum as the gelling agent, respectively.

Current US Original Classification (1):

424/450

CLAIMS:

- 1. A liposome-based formulation comprising:
- (a) a dermatologically effective amount of vitamin D or a derivative thereof selected from the compounds 1.alpha.,25-dihydroxycholecalciferol and 1.alpha.-hydroxycholecalciferol or mixtures thereof;
- (b) lecithin or hydrogenated lecithin;
- (c) cholesterol or a derivative thereof selected from cholesterol esters, polyethylene glycol derivatives of cholesterol (PEG-cholesterols), and organic acid derivatives of cholesterols;
- (d) an <u>alcohol</u> of one to six carbon atoms.
- 2. The liposome-based formulation of claim 1, wherein the lower <u>alcohol</u> is ethanol.

First Hit Fwd Refs



L8: Entry 24 of 53

File: USPT

Jan 27, 1998

DOCUMENT-IDENTIFIER: US 5711965 A

TITLE: Alcoholic aqueous gel-type phospholipid composition, its use and topical preparation containing it

Abstract Text (1):

An alcoholic, aqueous gel-like phospholipid composition is disclosed which contains, as alcohols, ethanol, 1-propanol or 2-propanol, which is characterized in that this composition is a liposomal gel composed of 15.00 to 30.00 parts by weight of a phospholipid concentrate, 14.00 to 20.00 parts by weight of alcohol and 50 to 71.00 parts by weight of an aqueous solution as the remainder. The use of this phospholipid composition for the preparation of liposomal solutions by dilution with a solution and topical preparations which contain these solutions are additionally disclosed.

Brief Summary Text (1):

The present invention relates to an alcoholic, aqueous gel-like phospholipid composition and its use. The present invention furthermore relates to topical preparations containing it.

Brief Summary Text (14):

According to WO 85/03640, loaded <u>liposomes in a gel</u> matrix composed of starch or modified starch are claimed.

Brief Summary Text (15):

In EP-A-0 069 307 a method for the preparation of a <u>liposome gel</u> is described according to which an aqueous or solvent-containing lecithin solution is treated with ultrasound. Depending on the sonication period and sonication intensity, a more or less viscous gel is formed. By prolonging the sonication time or by means of mechanical stirring action, a liposome-containing aqueous solution is obtained as the final product.

Brief Summary Text (18):

U.S. Pat. No. 2,090,537 relates to a process for the preparation of "water-containing" lecithin (lecithin hydrate), consisting of a homogeneous mixture of preferably 15-25% vegetable lecithin, preferably 8-25% alcohol, in particular ethanol or isopropanol, and 58-78% water as the remainder. The water-containing lecithin is obtained by heating water and alcohol preferably to about 71.degree. C. (160.degree. F.), adding the lecithin and stirring. After cooling to room temperature, a phase separation occurs in which the lowermost phase of the three phases contains the lecithin hydrate. This lecithin phase, saturated with alcohol, water and oil, is already adequately stable as such and can be further purified by removal of the alcohol or a part of the water in vacuo, the water-containing lecithin being obtained. Alternatively, this phase can be obtained as a gel by acidifying to pH 4 to pH 6.

Brief Summary Text (26):

The present application is based on the object of providing an <u>alcoholic</u>, aqueous gel-like phospholipid composition which is self-preserving, storable and transparent.

Brief Summary Text (27):

This object is achieved by the gel-like phospholipid composition being a liposomalgel, i.e. a system built up exclusively from liposomes, which consists of a phospholipid concentrate of specific composition, alcohol and water in specific concentrations and whose aqueous phase is virtually exclusively the internal phase.

Brief Summary Text (28):

The invention thus relates to an <u>alcoholic</u>, aqueous gel-like phospholipid composition which, as <u>alcohol</u>, contains ethanol, 1-propanol, 2-propanol or mixtures thereof, which is characterized in that the phospholipid composition is a <u>liposomal</u> gel of the following composition:

Brief Summary Text (33):

20.00-14.00 parts by weight of alcohol and

Brief Summary Text (35):

The gel-like phospholipid composition according to the invention has a transparent structure which is homogeneous and substantially free of agglomerates and other clouding agents and has a mean particle size of 200 nm.+-.20%. (Electron microscopy, freeze-fracture). The liposomal solution obtained from the gel-like phospholipid composition by dilution with aqueous solution preferably has an average lipsome size of 200 nm.+-.20% (determined by the laser light-scattering method) and is thus preferably employed in topical preparations, such as cosmetic or pharmaceutical preparations, which require a liposome particle diameter of 100-400 nm, preferably 100-200 nm. A particular advantage is that these liposomes remain transparent, in dependence of active substance, not only in the unloaded state, but also in the loaded state. Additionally, both the gel and the liposomal solution can be prepared in sterile and pyrogen-free form, according to German Pharmacopeia 9, so that they can be formulated to give cosmetic and pharmaceutical preparations without additional, possibly allergenic, preservatives. Furthermore, it has been surprising for the person skilled in the art that alcohol in concentrations of 14 to 20% by weight does not lead to destruction of the liposome solution.

Brief Summary Text (36):

Finally, a liposomal solution can be obtained in an industrially simple manner from the phospholipid composition (<u>liposome gel</u>) according to the invention without having to carry out process steps which are industrially and energetically complex, that is to say in particular without increasing the temperature or employing ultrasound.

Brief Summary Text (50):

The <u>alcohol</u> is employed in amounts of 14 to 20 parts by weight, preferably about 16 parts by weight, per 100 parts by weight of the phospholipid composition according to the invention.

Brief Summary Text (53):

The phospholipid concentrate is present in the liposomal solution in amounts from 10.10 to 20.20 parts by weight, preferably 10.10 parts by weight, relative to 100 parts by weight of the total liposomal solution. The <u>alcohol</u> is present in the liposomal solution in amounts from about 16 parts by weight, relative to 100 parts by weight of the total liposomal solution. The aqueous solution is present in the liposomal solution in amounts from 63.80 to 73.90 parts by weight, relative to 100 parts by weight of the total liposomal solution. According to a preferred embodiment of the present invention, at least one biologically active substance can be admixed to the <u>liposomal gel</u>. Examples of active substances of this type are anti-inflammatories such as ketoprofen, bisabolol etc., anticoagulants such as heparin, hirudin etc., antimycotics, and also spasmolytics or circulation-promoting agents, i.e. vascodilator such as papaverine.

Detailed Description Text (1):

The gel-like phospholipid composition is prepared in an industrially particularly simple manner by stirring the phospholipid concentrate of determined composition with a determined amount of alcohol for a short time and inducing gel formation by addition of water and further stirring. The stirring can be carried out using any commercially available stirrer.

Detailed Description Text (17):

The following examples show how liposomal solutions are obtained from the phospholipid-containing <u>liposomal gel</u> by means of simple process steps.

Detailed Description Text (28):

The <u>liposomes</u> which are present in the <u>gel</u> prepared according to the invention (FIG. 1) can be loaded with various active substances. Surprisingly, loading can be carried out both with lipophilic (for example bisabolol) and with hydrophilic (for example papaverine.times.HCl) substances.

<u>Current US Original Classification</u> (1): 424/450

CLAIMS:

- 1. A <u>liposomal gel</u> composition comprising an aqueous phospholipid composition which comprises:
- (a) 15-30 parts by weight of a phospholipid concentrate, consisting of
- (i) 70-80 parts by weight of phosphatidylcholine,
- (ii) 15-5 parts by weight of at least one acidic phospholipid selected from the group consisting of phosphatidylethanolamine, phosphatidic acid, N-acylphosphatidylethanolamine and mixtures thereof,
- (iii) 5-25 parts by weight of at least one other phospholipid selected from the group consisting of lysophosphatidylcholine, phosphatidylinositol and mixtures thereof, and
- (iv) 1-15 parts by weight of at least one phosphorus-free lipid per 100 parts by weight of (i), (ii) and (iii);
- (b) 20-14 parts by weight of at least one alcohol and
- (c) 50-71 parts by weight of an aqueous solution.
- 2. The $\underline{\text{liposomal gel}}$ composition according to claim 1, wherein the phospholipid concentrate consists of
- (i) 80 parts by weight of phosphatidylcholine,
- (ii) 5-15 parts by weight of at least one acidic phospholipid,
- (iii) 15-5 parts by weight of at least one other phospholipid, and
- (iv) 1-9 parts by weight of at least one phosphorus-free lipid per 100 parts by weight of (i), (ii) and (iii).
- 3. The $\frac{\text{liposomal gel}}{\text{lipid}}$ composition according to claim 1 or 2 wherein the phosphorus-free lipid is selected from the group consisting of glycolipids, phytolipids and mixtures thereof.

- 4. The <u>liposomal gel</u> composition according to claim 1 or 2 wherein the <u>alcohol</u> is selected from the group consisting of ethanol, 1-propanol, 2-propanol and mixtures thereof.
- 5. The <u>liposomal gel</u> composition according to claim 1 or 2 wherein the <u>liposomal gel</u> comprises about 16 percent by weight of <u>alcohol</u>.
- 6. A topical pharmaceutical preparation comprising at least one liposomal gel composition according to claim 1 or 2, at least one biologically active substance selected from the group consisting of anti-inflammatories, anti-coagulants, antimycotics, spasmolytics, vasodilators and mixtures thereof, and at least one pharmaceutical excipient.
- 7. A topical pharmaceutical preparation comprising at least one <u>liposomal gel</u> composition according to claim 5, at least one biologically active substance selected from the group consisting of anti-inflammatories, anti-coagulants, antimycotics, spasmolytics, vasodilators and mixtures thereof, and at least one pharmaceutical excipient.
- 8. A topical cosmetic preparation comprising at least one $\underline{\text{liposomal gel}}$ composition according to claim 1 or 2, at least one cosmetic skin-care agent and at least one cosmetic excipient.
- 9. A topical cosmetic preparation comprising at least one <u>liposomal gel</u> composition according to claim 5, at least one cosmetic skin-care agent and at least one cosmetic excipient.

First Hit Fwd Refs



L8: Entry 43 of 53

File: USPT

Jul 27, 1993

DOCUMENT-IDENTIFIER: US 5230899 A

TITLE: Methods and compositions for making liposomes

Brief_Summary Text (16):

In practical terms, liposomes formed using this invention are formulated as a "preliposome gel" referred to herein as a "gel" where a phospholipid and an aliphatic or aromatic-based acid or amine mixture capable of forming liposomes is mixed with an appropriate, concentrated aqueous solution of the hydrating compound. This gel, upon dispersion in an aqueous solution, efficiently and spontaneously forms liposomes without solvent evaporation, input of ultrasonic irradiation or any of the other means developed to insure proper formation of lipid vesicles, liposomes.

Brief Summary Text (18):

Additionally, the pre-liposome gel can be dehydrated and stored for a substantial period of time and still be capable of spontaneously forming liposomes upon rehydration.

Brief Summary Text (19):

The pre-liposome gel is extraordinarily stable, stable enough to be autoclaved for sterilization. Furthermore, water-soluble or water-insoluble substances to be encapsulated can be added to the gel and will then be incorporated into the liposomes upon dispersion of the gel. This capability has the effect of greatly enhancing the encapsulation efficiency.

Brief Summary Text (44):

Additionally, the fatty acids also can be replaced by amines (e.g., C.sub.8 .about.C.sub.24 NH.sub.2), C.sub.8 .about.C.sub.24 fatty acid derivatives of amines (e.g., C.sub.8 .about.C.sub.24 CONH.about.NH.sub.2), C.sub.8 .about.C.sub.24 fatty alcohol derivatives of amino acids (e.g., C.sub.8 .about.C.sub.24 OOC.about.NH.sub.2), and C.sub.8 .about.C.sub.24 fatty acid esters of amines (e.g., C.sub.8 .about.C.sub.24 COO.about.NH.sub.2).

Brief Summary Text (46):

Although the primary components of these liposomes will be lipids, phospholipids, other fatty acids, there may also be added various other components to modify the liposomes' permeability. There may be added, for example, non-ionic lipid components such as polyoxy alcohol compounds, polyglycerol compounds or esters of polyols; the esters of polyols and synthetic lipolipids, such as cerebrosides. Other materials, such as long chain alcohols and diols, sterols, long chain amines and their quaternary ammonium derivatives; polyoxyethylenated fatty amines, esters of long chain amino alcohols and their salts and quaternary ammonium derivatives; phosphoric esters of fatty alcohols, polypeptides and proteins.

Brief Summary Text (48):

It also has been discovered that if the lipid component itself or the substances (e.g., medicaments, biologically active compounds, cosmetics, etc.) to be encapsulated possess the aforementioned properties, the lipid composition may not require the inclusion of the fatty acids (or the amines) or the hydrating agents to form the "pre-liposome gel". For example, the mixture of dipalmitoylphosphatidylcholine (DPPC) and distearoyl phosphatidylethanolamine forms

the "pre-liposome gel" or liposomes with aqueous glutamic acid solution and the mixture of DPPC and oleic acid with aqueous epinephrine solution forms the "pre-liposome gel" and liposomes.

Brief Summary Text (74):

Mixtures of liposome-forming materials, a long chain aliphatic or aromatic-based acid or amine, and one or more hydrating agents with up to 300 moles of water relative to the total solids gives a gel which forms liposomes directly therefrom upon addition of an aqueous solution. This gel can be labeled a pre-liposome gel because i.) of its structural characteristics which are essentially those of liposomes and, ii.) the gel's facility for being converted into liposomes upon dilution with an aqueous solution. Aqueous solution in excess of about 300 moles cause the beginning of liposome formation.

Brief Summary Text (79):

The pre-liposome gel, with or without the material to be encapsulated, also can be dehydrated (e.g. lyophilized) and the powder rehydrated to form liposomes spontaneously, even after a long period of storage. This capability makes the invention particularly useful for administering water-sensitive medicaments where long term pre-use storage is needed.

Detailed Description Text (12):

ii). Manufacture of <u>Liposomes: The gel</u> prepared in the preceding Paragraph was taken from cold storage and returned to room temperature. It was then mixed with 2 liters of phosphate buffered saline, pH 7.4. A white opaque liposome solution was formed.

Detailed Description Text (17): Pre-Liposome Gel

Detailed Description Text (53):

To 120 mg of dipalmitoylphosphatidylcholine was added 40 mg of oleic acid to form a homogeneous paste. Forty mg of pilocarpine free base was added to 10 ml of distilled deionized water. This solution was added to the paste and heated to 45.degree. C. to form a pre-liposome gel. The resulting gel was diluted with 20 ml of phosphate buffered saline to form liposomes.

Detailed Description Text (72):

Sterile liposomes may be prepared from the heat sterilized pre-liposome gel. Alternatively, the liposome gel or the liposomes may be sterile filtered through an appropriate sterilizing filter.

Detailed Description Text (84):

A 10.0 gm aliquot of this pre-liposome gel was transferred to a 10 ml vial and lyophilized. The resulting powder formed liposomes when diluted with 5 ml of phosphate buffered saline.

<u>Current US Original Classification</u> (1): 424/450

Fwd Refs First Hit



L8: Entry 5 of 53

File: USPT

Oct 22, 2002

US-PAT-NO: 6469084

DOCUMENT-IDENTIFIER: US 6469084 B2

TITLE: Process for preparing an aqueous composition in gel form and compositions obtainable from this process, especially a composition containing vesicles, in particular liposomes

DATE-ISSUED: October 22, 2002

INVENTOR-INFORMATION:

STATE ZIP CODE COUNTRY CITY NAME FR Paris Iliopoulos; Ilias FR Issy-les-Moulineaux Cartalas-Sarrazin; Anne FR Le Havre Loyen; Karine FR St Leu la Foret Audebert; Roland FR Courbevoie Meybeck; Alain FR Marigny-les-Usages Tranchant; Jean-Fran.cedilla.ois

ASSIGNEE-INFORMATION:

TYPE CODE ZIP CODE COUNTRY STATE CITY NAME 0.3

FR LVMH Recherche

[PALM] APPL-NO: 09/ 845963 DATE FILED: April 30, 2001

CROSS REFERENCE TO RELATED APPLICATIONS This application is a continuation of U.S. patent application Ser. No. 08/854,413 filed May 12, 1997, now U.S. Pat. No. 6,288,137; which was a continuation of U.S. patent application Ser. No. 08/592,319 filed Mar. 4, 1996, now abandoned, which was a .sctn. 371 of PCT/FR94/00971 filed Aug. 2, 1994 which in turn claimed the priority of French Patent Application No. 93/09607 filed Aug. 4, 1993.

FOREIGN-APPL-PRIORITY-DATA:

APPL-DATE APPL-NO COUNTRY

August 4, 1993 93 09607 FR

INT-CL: [07] C08 K 5/06, A61 K 9/27, A61 K 7/06

US-CL-ISSUED: 524/376; 524/394, 524/555, 524/556, 524/804, 424/70.31, 424/450,

US-CL-CURRENT: 524/376; 424/450, 424/70.31, 523/102, 524/394, 524/555, 524/556,

524/804

FIELD-OF-SEARCH: 524/376, 524/394, 524/555, 524/556, 524/804, 424/70.31, 424/450

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

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	PAT-NO 4432881 6288137	ISSUE-DATE February 1984 September 2001	PATENTEE-NAME Evani Iliopoulos et al.	US-CL
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FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO 0057875 0346995 91/08280	PUBN-DATE August 1982 December 1989 June 1991	COUNTRY EP WO	US-CL
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ART-UNIT: 1714

PRIMARY-EXAMINER: Yoon; Tae H.

ATTY-AGENT-FIRM: Bierman, Muserlian and Lucas

ABSTRACT:

The present invention concerns a process for preparing an aqueous composition in the form of a gel at a given temperature. The process is characterized in that an associative water-soluble polymer constituted by a hydrophilic main chain and hydrophobic pendant groups is brought into the presence, in said composition, of at least one surfactant in the form of bilayers when it is in aqueous solution under the same temperature and concentration conditions. Compositions in the form of gels or liquids are thus obtained.

50 Claims, 9 Drawing figures